Public Health England

Protecting and improving the nation's health

Safer Radiotherapy

e-Bulletin #2

September 2020

Welcome to the Safer Radiotherapy (RT) e-bulletin, providing key messages and learning from radiotherapy error (RTE) reports and patient safety initiatives.

In 2010, PHE brought together representatives from The Royal College of Radiologists (RCR), the Society and College of Radiographers (SCoR), Institute of Physics and Engineering in Medicine (IPEM), NHS England & Improvement (NHSEI) and a lay representative to form a steering group to support the coordination of efforts to improve patient safety in RT across the UK. This work includes the collation, analysis and promulgation of learning from RTE reports.

Anonymised RTE reports are submitted on a voluntary basis through the National Reporting and Learning System (NRLS) of NHSEI or directly to PHE, to promote learning and to minimise recurrence of these events. Safer RT accompanies the **Triannual RTE Analysis & Learning Report**, designed to disseminate learning from RTE to professionals in the RT community to positively influence local practice and improve patient safety.

Published three times a year, the next issue will be shared in January 2021. All previous e-bulletins can be found **here**. To subscribe to future editions of the e-bulletin please follow this **link**. Please email **radiotherapy@phe.gov.uk** for advice on reporting and learning from RTE and with comments or inclusions in the e-bulletin.

Thank you to all RTE reporters who facilitate this work.

PHE update

On the 18th August 2020, the Government announced the creation of a new **National Institute for Health Protection** (NIHP). All the radiation protection services currently provided by the Centre for Radiation, Chemical and Environmental Hazards (CRCE) within PHE, including this work are planned to transfer into NIHP. The administrative process to complete the establishment of this new body will be completed by the Spring 2021.

Please be assured that this transition does not affect arrangements with stakeholders; all contracts for services and appointments of PHE in a radiation protection expert capacity will remain valid. Stakeholders will be advised when the transition is complete, and the change of name comes into force.

IR(ME)R: Implications for Clinical Practice in Radiotherapy

The RT Board guidance on the implementation of the 2017/2018 IR(ME)R has been published and can be found **here**. The guidance aims to support the RT and molecular RT communities in the clinical implementation of the updated regulations. Separate guidance has also been published to support the diagnostic, interventional and nuclear medicine imaging communities, as available **here**.

Radiotherapy errors and near misses, reporting and learning survey

The Patient Safety in Radiotherapy Steering group (PSRT) launched a survey at the beginning of July. The purpose of the survey was to identify trends in local and national reporting and learning from RTE. It was also used to better understand how the Safer RT publications are used locally to inform practice.

There was a positive response rate of 59.4% (n = 41/69). However not all respondents completed all questions in the survey. Electronic reporting systems were reported to be used by 87.8% (n = 36) of respondents. Only 56.7% (n = 17/30) reported all levels of RTE, 36.7% (n = 11) reported levels 1-4 and 6.6% (n = 2) reported levels 1-3 to the NRLS/PHE. From the respondents who did not report all levels of RTE, a single respondent stated, “the trust safety team would not understand the value of level 5 reporting” and another stated “there is not enough resource to report level 5 RTE” to PHE. However, the respondents who reported all levels of RTE nationally justified this with comments such as “learning can be found in all levels of incidents” and “all are relevant for reporting”.

More detailed analysis of the results will be shared in future e-bulletins and learning will be used to inform PSRT work.

Update to SAUE guidance

The CQC, HIS, HIW and RQIA have released updated guidance on significant accidental and unintended exposures (SAUE). The update includes redefined notification criteria for RT planning and verification imaging, new notification criteria for nuclear medicine therapy incidents and guidance on applying notification criteria to laterality errors. The updated guidance can be seen **here**.

Medical physical experts (MPEs)

IR(ME)R requires MPEs to be recognised by the secretary of state in GB and Department of Health in Northern Ireland. RPA2000 has been appointed to act as the authorised assessing body for MPE recognition. Applications for MPEs to transfer from a list of IR(ME)R (2000) to IR(ME)R 2017/IR(ME)R 2018 NI remain open until Tuesday 31st August 2021. Further details can be seen **here**. All new applications should go to **RPA2000**.

COCIR, EFOMP & ESTRO guidelines on information on equipment

Guidelines for manufacturers of RT equipment on how to provide information to users as required under Article 78 of the **Basic Safety Standards Directive** was developed late last year. In addition, a template for completion by the manufacturer on residual risk to help the user to perform a study of the risk of unintended exposures as part of a quality assurance programme for RT practice was also developed. The documents can be found **here**.

Links to international patient safety resources

ASTRO and AAPM RO-ILS Case Studies

Autorité De Sûreté Nucléaire (French Nuclear Safety Authority) Publications for Professionals

IAEA, SAFRON Updates on Patient Safety in Radiotherapy

Patient safety specialists

The NHSI Patient Safety Incident Response Framework was launched earlier this year. This is a part of the **NHS Patient Safety Strategy** published in July 2019. A key part of this is the requirement for NHS organisations in England to identify a designated **patient safety specialist**. These specialists will work full time as patient safety experts, providing dynamic senior leadership, visibility and support. In addition, they will support the development of a patient safety culture, safety systems and improvement activity. Early engagement with these new colleagues will be important for RT providers.

IRRS mission

Integrated Regulatory Review Service (IRRS) teams evaluate a state's regulatory infrastructure for safety against IAEA safety standards. A review of the UK's nuclear and radiological safety framework was conducted in October 2019. The review included 16 regulatory bodies and governmental departments. The mission report can be found **here.** It includes recommendations to further strengthen the UK's safety framework and highlights good practice for consideration by the relevant UK authorities and regulatory bodies.

WHO – World Patient Safety day 2020

The 17th September marked the **World Patient Safety Day**. The objectives of were to increase public awareness and engagement, enhance global understanding, and spur global solidarity and action to promote patient safety. Also **a Decade of Patient Safety** 2020-2030 was launched in Geneva in February 2020. A Global Patient Safety Action Plan 2021-2030 has been developed, further information can be seen **here**.

Changes to ARSAC research application process

A new online portal for ARSAC approval of new research studies was launched on the 2nd September. Specific guidance on how to use the **online portal is available here** including information on how to set up an account. Further information on the research process is available on the **ARSAC website**.

RT referral pause and check poster

The SCoR have updated the RT referral pause and check poster with input from the PSRT. This is a checklist for referrers about to refer patients for RT. The checklist covers patient ID, confirmation of diagnosis and laterality, user checks against local protocols, ensuring appropriate reports are available and entitlement. These new pause and check posters can be found **here**.

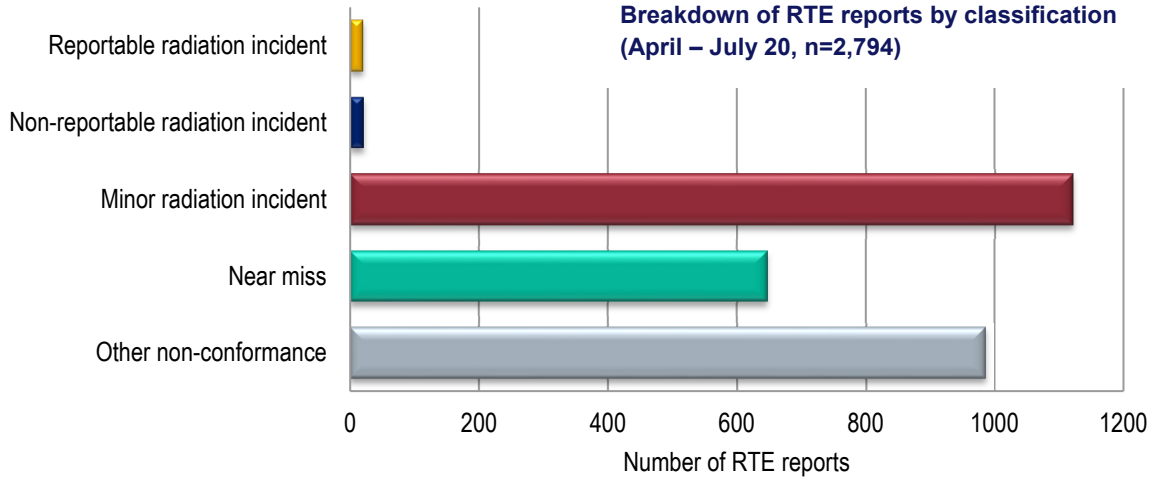
Dates for the diary	
BIR annual congress	4 – 6 November, Virtual
Patient safety virtual congress	10 – 12 November
SRP annual conference	16 – 18 March 2021, Virtual
BIR annual RT and Oncology meeting	18 – 19 March 2021

RTE Data analysis: April to July 2020

The full detailed data analysis is available **here** and includes data on primary process subcoding, safety barriers (including methods of detection), causative factors, and the severity classification of the RTE. These taxonomies are described in the **Development of learning from RTE**. The following data offers a summary of findings. Submissions from 50 NHS UK providers contributed to this issue's full data analysis. Ten providers have not reported RTE for this reporting period.

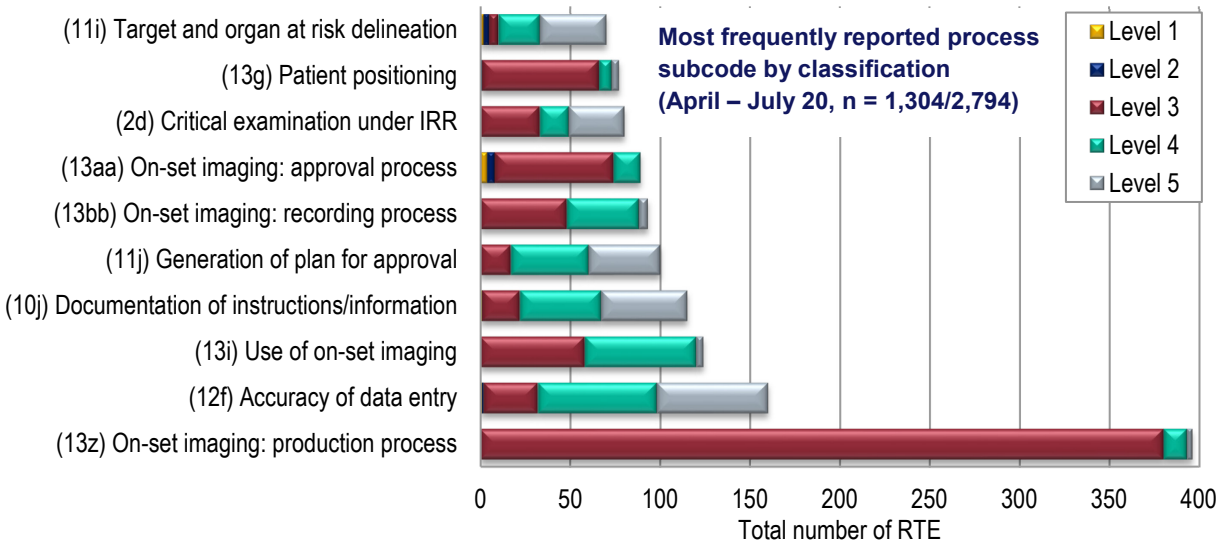
Classification of RTE

Of those 2,794 RTE reported, 2,753 reports (98.5%) were classified as minor radiation incidents, near misses or other non-conformances. These are lower-level incidents which would have no significant effect on the planning or delivery of individual patient treatments.



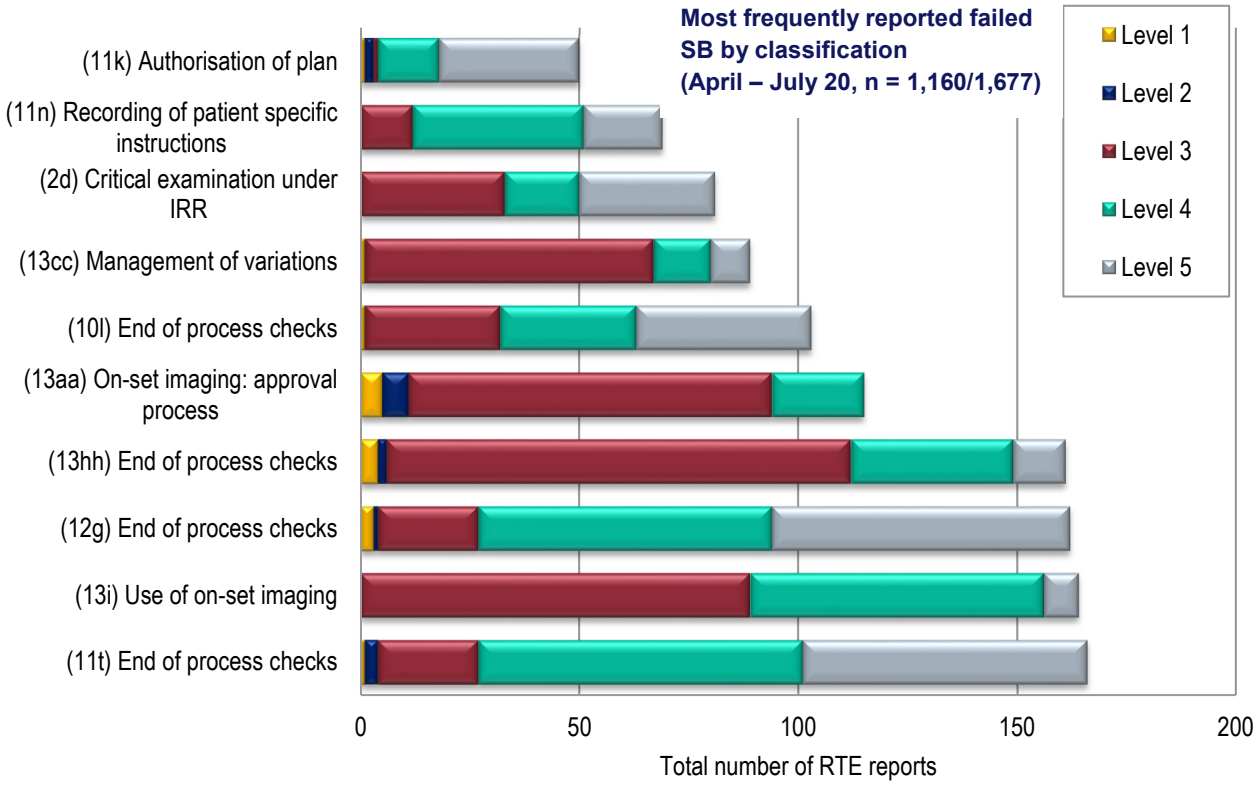
Primary process subcode

The most frequently reported points in the patient pathway where the RTE occurred are shown below. Consistent with the previous analysis 'on-set imaging: production process' is the most frequently occurring process code (14.2%, n = 396).

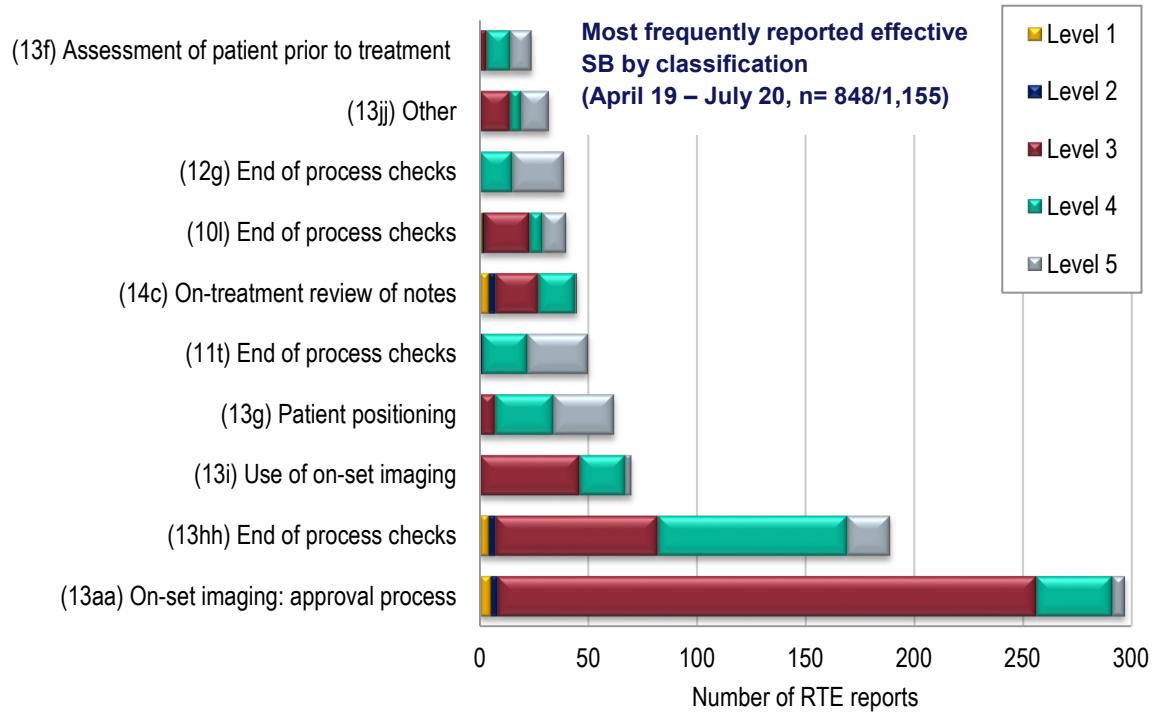


Safety Barriers (SB)

A total of 1,677 failed SB were identified in the RTE reported. The most frequently reported failed SB can be seen below. Pretreament planning process 'end of process checks' was the most frequently reported failed SB (9.9%, n = 166).



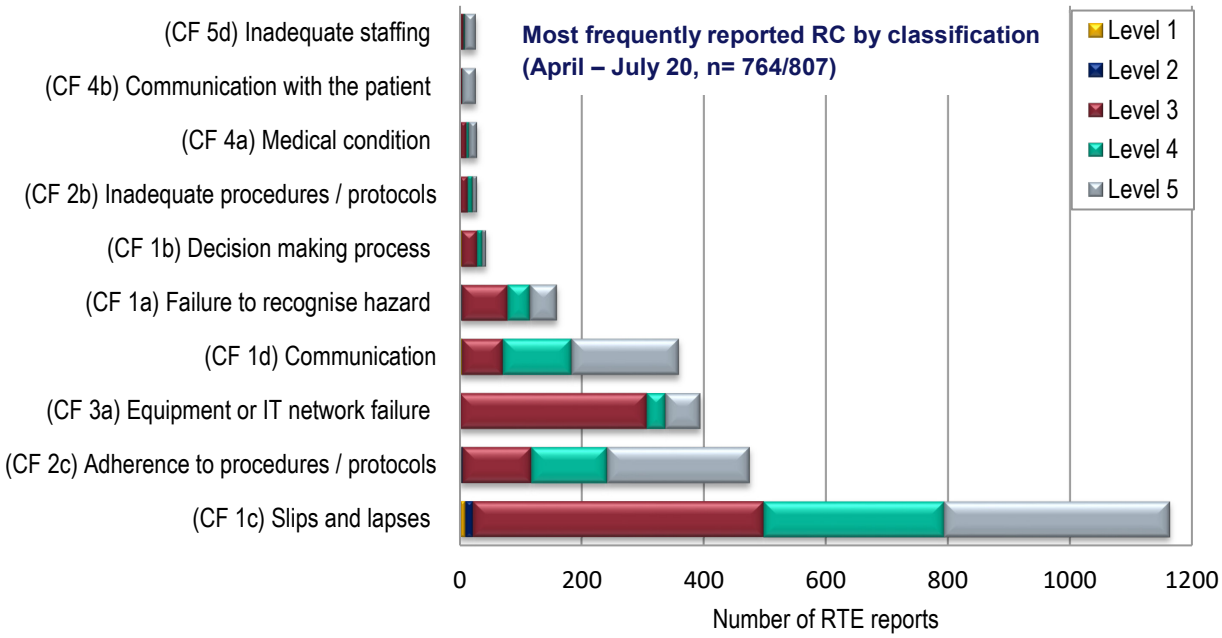
For this reporting period 1,155 reports contained effective SB or method of detection (MD). The most frequently reported effective SB was 'on-set imaging: approval process' (25.7%, n = 297).



Causative Factors

Causative factors were applied to 2,395 (85.7%) RTE reports by 45 (90.0%) providers for this reporting period. Using the free text shared in reports, PHE coded a further 399 reports, totalling 2,798 RTE reports for analysis. The primary factor is the root cause (RC) and the subsequent factors are contributory factors (CF) associated with an RTE. The most frequently reported RC was individual 'slips and lapses'

(41.6%, n = 1,164). CF were indicated across 683 reports; 107 of these contained multiple factors leading to 807 CF. The most frequently reported CF was 'adherence to procedures/protocols' (43.7%, n = 353).

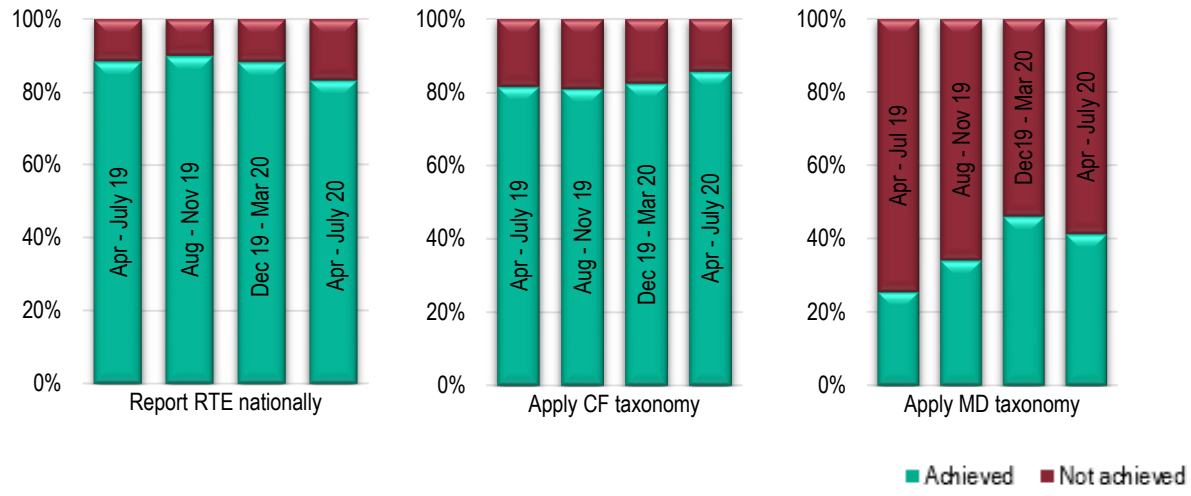


COVID related RTE

As the response to the COVID-19 pandemic was initiated in March a review of this dataset (covering April to July 20) for COVID-related RTE was completed. No RTE directly associated with the COVID response were identified. It was noted there was no obvious impact on RTE trends for this reporting period. The search revealed only 56 reports which referenced staff shortage and workload pressure due to COVID or local process changes due to COVID as potential contributory factors in the reported error. These were all lower level incidents which would have no significant effect on the planning or delivery of individual patient treatments.

PSRT's targets for RTE reporting

The PSRT has set ambitious targets to improve specific areas of RTE reporting by September 2020. These include 100% of providers to report monthly and 100% of reports to include a causative factor (CF) and a method of detection (MD) code. The following graphs indicate how we are progressing with these targets across the 4-monthly analyses. Please help us meet these targets.



Guest Editorial

Learning from Excellence (LfE) – An Initial Radiotherapy Perspective

Martin Duxbury

Deputy Head of Radiotherapy, St James Institute of Oncology, Leeds

What a load of nonsense! That was my initial reaction when I was asked if we would be willing to participate in a local LfE initiative called GR8X here at Leeds. Having spent a lot of time working with incident learning systems I was somewhat sceptical about this initiative and very much of the view that we learn more when things have gone wrong.

GR8X (a similar on-line report form to datix, but for "good stuff") was introduced across our Trust in January 2020 with the aim of providing organisational learning from excellence (things done well). The on-line forms can be completed by any staff member, with the idea any staff member can recognise something positive or done well. Once the GR8X is completed an individual is nominated and a certificate is emailed to them outlining the reason for the GR8X.

Between January and June 2020, the RT service achieved 138 GR8X forms. These referred to booking staff, clinicians, RT Physics staff and radiographers. The forms are compiled into quarterly GR8X summaries and combined with the quarterly RTE summaries in a joint learning bulletin for staff. The GR8X results have been grouped into themes and can be seen in the following table:

Theme	Jan-Jun 2020, QTY	Example
Leadership	26	Managers showing great leadership during COVID; senior staff showing leadership in decision making
Compassion & Kindness to patients	17	Going out of way to help patients including staff not "normally" patient facing
Compassion & Kindness to Staff	4	Boosting morale
Teaching & Mentoring	3	Teaching individuals well
Team Working	15	Great team-player; pulling together to finish
Supporting Colleagues	28	Helping colleagues out through personal issues; supporting colleagues adapting to new processes
Going the Extra Mile	25	Individuals going out of their way to do extra
Research & Innovation	12	Finding innovative ways to treat non-standard patients
Other	8	Recognising colleagues for being great colleagues

Through GR8X forms we gain additional and different learning to what we attain through use of incident forms (in our case Datix).

- **Datix** – helps identify failures which highlight areas for improvement in our procedures (see Reason's Swiss Cheese model[1]).
- **GR8X** (to date) – helps identify the human qualities and values that staff have shown which make things better.

Both have a role to play in improving our service and patient safety.

The learning and service improvement attained through use of GR8X comes from acknowledging staff – this includes acknowledging their leadership (not just managers), their ability to boost morale, the extra care they show for patients, supporting each other and doing that bit extra. When someone receives a GR8X it tends to make them want to behave in that way again or do that bit extra - this is how a service is improved, staff wanting to do better.

We are still in the infancy of LfE, so further understanding of how the service can improve, and preferably some tangible evidence, is needed. This will develop as staff get better at completing the forms and with further development of the forms to extract more meaningful data. Developing a process of appreciative enquiry and causal analysis will help provide this evidence.

Other non – RT departments may view incident reports in a more negative light. Therefore, having a counter to the negative connotation of an incident report is widely applauded. Our RT community embraces the use of such a system to actively improve our services and learn from each other.

Within RT we review all levels of errors including near misses (level 4) and non-conformities (level 5). We are quite unique in our use of level 5 RTE. Level 5 and often level 4 RTE are examples of the success of our quality systems in stopping errors and the success for our staff in identifying errors and correcting them before they become incidents. These could then be by default, LfE/GR8X in all but name. Future work may be to integrate GR8X with Level 5 RTE for improved learning. LfE allows further opportunities to learn from what we do well.

Reference:

1. Reason J. Human Error. Cambridge: Cambridge University Press; 1990